

ABSTRACT

The object of the present invention is to provide a plated steel sheet capable of securing excellent post-painting corrosion resistance and brightness, and the present invention makes it possible to produce a plated steel sheet excellent in post-painting corrosion resistance and paint coat image clarity by further adding one or more elements selected from among 0.01 to 0.5% of Ca, 0.01 to 0.2% of Be, 0.0001 to 0.2% of Ti, 0.1 to 10% of Cu, 0.001 to 0.2% of Ni, 0.01 to 0.3% of Co, 0.0001 to 0.2% of Cr and 0.01 to 0.5% of Mn, in mass, to the plated layer of the plated steel sheet which is characterized in that the center line average roughness Ra of the Zn alloy plated steel sheet is 1.0 μm or less and the filtered waviness curve W_{CA} thereof is 0.8 μm or less, the Zn alloy plated steel sheet having on the surface thereof the plated layer containing 1 to 10% of Mg, 2 to 19% of Al and 0.001 to 2% of Si in mass and other elements the total amount of which is suppressed to 0.5% or less in mass, with the balance consisting of Zn.